Hiroshi INOUE*: **Notes on *Plagiochila eatoni* Aust., a Hawaiian liverwort**

井 上 浩*: ハワイ産 *Plagiochila eatoni* Aust. について

Plagiochila is a large genus in the Hepaticae comprising more than 1500 species described from all over the world, in which many dubious species are included. Some species have recently been transferred to other genera, for example, *Plagiochilion* Hatt. and *Xenochila* Schust. During the course of a monographic study of *Plagiochilion*, I had the opportunity to examine the type specimen of *Plagiochila eatoni* Aust., a Hawaiian species which has been placed in the "Oppositae" group (now treated as *Plagiochilion*).

Plagiochila eatoni was collected by Baldwin in Aug. 1875 at West Maui. It was first studied by Austin and described as a new species (in msc.). Diagnoses and figures were published by Evans (1891) with a short description, who stated, "*P. eatoni* is appearently a near ally of *P. brauniana* Nees......but the leaves are distinctly imbricate and somewhat longer than they are broad." Stephani (1897) enumerated this species in his list of the Hawaiian hepatics. In 1906, he followed Evans' concept of *P. eatoni*, but certainly he did not study the type material. Following Carl (1931) grouped it in the subgenus Oppositae and noted, "Die Art wird von Evans mit *P. brauniana* vergleichen und beide nahe Verwandtschaft hervorgehoben."

The type material deposited in the herbarium of Yale University (YU) consists of two packets collected at the same locality and with the same number (Baldwin no. 109). One of them agrees well with Evans' description and figures of *P. eatoni*; the other is *Plagiochila* species not belonging to the "Oppositae" group. Evans' description is so short that I am adding here my own observations on the basis of the type material.

Plants about 10 cm long, about 3 mm wide with leaves, simple, reddish brown. Stem brown, about 0.4 mm thick, about 14 cells across, cortical cells in 2–3 layers, with moderately thickened walls, walls brownish, medullary cells with white, thin walls. Leaves with an oblique insertion, opposite, imbricate, obliquely to nearly horizontally spreading, ovate or orbicular-ovate, 1.3–1.4 mm wide and 1.4–1.5 mm long, margins entire throughout, the dorsal margin hardly

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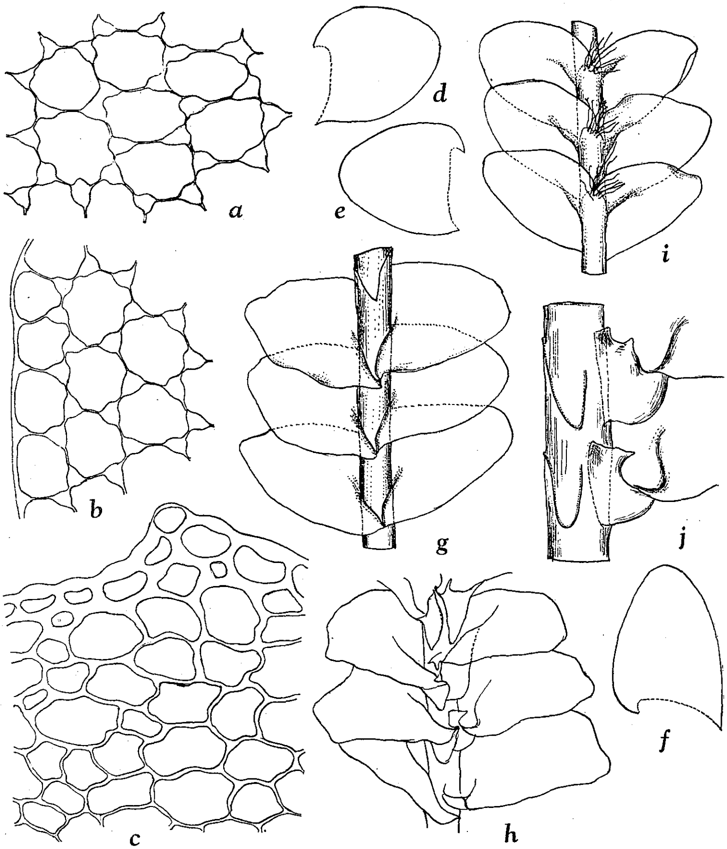
* National Science Museum, Tokyo. 国立科学博物館.

decurrent, slightly connate at the base with the opposite leaf, more or less inflated toward base, the ventral margin not decurrent, connate with the opposite leaf at base. Cells of the leaf apex and margin 20–23×27–36 μ, of the leaf middle 27–34×36–40 μ, of the leaf base 30–37×34–46 μ, walls thin throughout, reddish in the distal half of the leaf; trigons large, nodulose. Underleaves absent. Rhizoids restricted to a small area at or near the ventral end of the leaf insertion, fasciculate, nearly colorless. Plants dioecious (female plants not observed). Male inflorescences terminal, bracts about 7 pairs, closely imbricate,



Syzygiella eatoni (Aust.) Inoue. a. Cells from leaf middle. × 300. b. Cells from leaf margin. × 300. c. Part of cross section of stem. × 300. d–f. Leaves. × 10. g. Part of plant, dorsal view. × 10. h. Part of male inflorescence. × 10. i. Part of plant, ventral view. ×10. j. Part of male inflorescence, showing insertion lines of bracts ×20. All figs. based on type specimen.

entire throughout, similar to the leaves in shape but strongly saccate and having a clear reddish pigmentation at the base, the insertion line of bracts V-shaped, paraphises absent.

Among the diagnostic characters for the species, the followings seem to be most important in typifying *P. eatoni*; (1) rhizoids are fasciculate and restricted to a small area of the ventral base of leaves, (2) a reddish pigmentation of male bracts and in the distal half of leaves, and (3) saccate male bracts with a V-shaped insertion line. These characters easily separate *P. eatoni* from other species of both *Plagiochila* and *Plagiochilion*. In *Plagiochilion* the leaves are opposite but they are always dentate at the margin near the inflorescence (except for *P. braunianus*) and never have reddish pigmentation. All of the characteristics of *P. eatoni* agree with those of *Syzygiella* Spruce. I cannot find no objection to transferring *P. eatoni* to the genus *Syzygiella*.

Syzygiella eatoni (Aust.) Inoue, comb. nov.

Plagiochila eatoni Aust. in Evans, Trans. Conn. Acad. Arts & Sci. **8**: 257, pl. 22, f. 11–12 (1891); Stephani, Bull. Herb. Boiss. **5**: 84 (1897), Spec. Hepat. **2**: 401 (1906); Carl, Ann. Bryol. suppl. **2**: 41 (1931).

Specim. exam.: West Maui, Hawaiian Islands; 5000 ft. alt, on truncks of tree; Aug. 1875 (D.D. Baldwin leg. no. 109-type in herb. YU). Range: Hawaiian Islands (West Maui). The genus *Syzygiella* seems to be a new addition to the flora of Hawaiian Islands.

The genus *Syzygiella* contains some 40 described species, but few of them have been carefully studied. Some species now included in *Plagiochila*, especially those from South America, should be transferred to *Syzygiella*. Therefore, it is now impossible to state exactly the relationship of *S. eatoni* to the other species.

I am much indebted to Dr. S. Hattori for his kind criticism. My sincere thanks are also due to Dr. J.R. Reeder of Yale University for sending me on loan the type material of *Plagiochila eatoni* and to Dr. M.E. Hale of Smithsonian Institution for locating the literature of the late A.W. Evans.

Literature Cited

Carl, H. 1931. Die Arttypen und die systematische Gliederung der Gattung *Plagiochila* Dum. Ann. Bryol. supp. **2**: 1–164. Evans, A.W. 1891. A provisional list of the Hepaticae of the Hawaiian Islands. Trans. Conn. Acad. Arts

& Sci. **8**: 253–261, pl. 22–23. Stephani, F. 1897. Hepaticae sandvicensis. Bull. Herb. Boiss. **5**: 840–849. ———. 1906. Species Hepaticarum 2. Génève.

Addendum

In vol. 37 no. 6 (1962) of this Journal, I described a new species, "*Plagiochila querpartensis*", from Isl. Quelpaert, Korea. But the specific epithet was incorrect. By the spirit of the Art. 73 of the International Code of Botanical Nomenclature, this epithet should be corrected as follows:

Plagiochila quelpaertensis Inoue, emend.

Plagiochila querpartensis Inoue, Journ. Jap. Bot. **37**: 188, f. 2 (1962).

摘 要

ムカイバハネゴケ属 (*Plagiochilion* Hatt.) のモノグラフを研究中にハワイから記載された *Plagiochila eatoni* Aust. のタイプを調べることができた。本種はムカイバハネゴケ属のものと考えられていたが，(1) 仮根が茎腹面の葉基部に束生すること，(2) 葉および雄包葉に赤色をおびること，(3) 雄包葉はV字状に茎につき，包葉の基部が強く膨らむこと，などから明らかに *Syzygiella* 属に入るものである。南アメリカやアフリカから *Plagiochila* 属として記載されたものでも，とくに葉が対生になるものの大部分は *Syzygiella* 属に移す必要があるが，いずれこの属も詳細に研究したいと考えている。

○ *Jungermannia pumila* With. について (井上 浩) Hiroshi INOUE: On *Jungermannia pumila* With. in Japan

Jungermannia pumila は日本では北海道に分布が知られていて，典形的な周極要素の一つに数えられる。1900 年に吉永虎馬氏は Stephani の同定によって本種を高知県横倉山で記録しているが，果してこれが正確な同定であったかどうかは疑問が残る。北海道からは Bescherelle (1894) および Stephani (1897) の記録にはじまり，最近では服部 (1957)，尼川 (1960) などの記録がある。上述のように正確な産地は日本では北海道だけでしか分っていなかったが，1955 年 3 月 に高知県長岡郡本山町にある白髪山で採集したものは典形的な *Jungermannia pumila* であった。

白髪山は蛇紋岩地帯で，高等植物にもいくつか特殊なものが知られているが，苔類でも *Acrobolbus ciliatus*, *Bazzania trilobata* などが分布している。*Jungermannia pumila* は白髪山の約 1300 m, 流水中の蛇紋岩上に密着して生育していた。四国では数少ない *Bazzania trilobata* や本種のような北方系の苔類が蛇紋岩上に遺存的に分布することは，北海道アポイ山のような北方の蛇紋岩地に日本中～南部に分布する種類ないしは南方系のものが不連続的に分布することと考え合せ，興味深い現象であると思う。

Jungermannia pumila With., a typical arctic or subarctic species, was found disjunctively in Shikoku: Mt. Shiraga, Kochi Pref.; ca. 1300 m alt.; on submerged serpentine rocks!; H. Inoue no. 4277, 4288, Mar. 25, 1955. In Japan, this species was prebiously only known from Hokkaido. (国立科学博物館)